

Remarks

Claims 1-5 and 8-10 are pending and are under consideration.

Claim 8 is canceled.

Claims 1-5 and 9-10 will be pending upon entry of this amendment.

Claim 8 is objected to because it should have been identified as "currently amended". Claim 8 is canceled.

Claims 1, 4-5 and 8-9 are rejected under 35 USC 103(a) as being unpatentable over Tonnvik, et al., U.S. Pat. No. 6,569,933 in view of Hovis, et al., U.S. Pat. No. 4,842,794 and further in view of Legge, et al., U.S. Pat. No. 4,457,775.

Claims 2, 3 and 10 are rejected under 35 USC 103(a) as being unpatentable over Tonnvik, in view of Hovis and Legge and further in view of Neri, et al., U.S. Pat. No. 5,844,042.

Applicants respectfully rebut these rejections.

Claims 1-5 and 9-10 are argued together.

The present process of preparing polymer additive granules requires that:

a) the additives are mixed together and converted to a workable mass and pressed through an orifice. The conversion to a workable mass takes place for instance in a heatable co-kneader (claim 4). The pre-shaped strand-like extruded mass is cooled and, while still in a workable state, formed into granules by rolling, impressing, cooling and comminuting;

b) the rolling is effected by passing the pre-shaped, still plastic material through two to three squeeze rollers with smooth and polished surfaces and the subsequent impressing is effected by processing the rolled out plastic material with one, two or three linearly embossed shaping rollers;

c) the material is impressed with a granular structure which provides predetermined breaking points in an impressed product mat and

d) the impressed product mat is allowed to harden on a cooling belt followed by comminuting to form granules along the impressed lines.

Tonnvik is cited as disclosing a method for producing low dust granulates of polymer additives where the additives are added to an extruder, heated, extruded through holes to form strands which are transported by two rolls and then granulated with rotating blades (Example 2 therein).

Tonnvik is silent on using squeeze rollers having smooth and polished surfaces followed by shaping rolls having embossing lines.

Hovis is cited as disclosing a process of preparing porous films with net-like patterns comprising polymers that may contain additives by passing extrudate of polymer through rolls having engraved lines.

Legge is cited as disclosing forming granules on a continuous steel belt with water cooled on its underside.

Neri is cited as disclosing a process of producing granular polymer additives and as disclosing a sieve granulator.

The Examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the process of Tonnvik by providing a first roller with a smooth surface, adding a second roller with an engraved surface in view of Hovis and adding a continuous steel belt for cooling and solidification.

Firstly, the present rolling is accomplished with two or three squeeze rollers with smooth and polished surfaces. Tonnvik does not at all disclose “squeeze” rollers, but rather discloses “The granulator consisted of two rolls for transport of the strands to a rotating blade.”, col. 4, lines 51-55. Tonnvik does not at all disclose “squeeze” rollers but rather transport rollers for strands. The present process produces a “rolled out plastic”. Tonnvik does not disclose a rolled out plastic. Thus,

Applicants submit that each of the elements of the present claims are not disclosed in the cited art. The disclosures of the cited references do not meet the limitations of the present claims.

Secondly, Applicants further submit that the Examiner has applied improper hindsight analysis to arrive at the present invention from the combined references. Tonnvik and Hovis are non-analogous art. Tonnvik and Neri are of the same field as the present invention as they are aimed at granulated polymer additives. Legge discloses a method of making granulated magnesium; although not directed at polymer additives, Legge is aimed at a method of making granules.

Hovis is not at all related to the present invention. Hovis is aimed at a method for making apertured films by properly embossing a thermoplastic film. The thermoplastic may be for instance polyethylene or polypropylene, col. 1, lines 58-68. Hovis teaches a process of embossing an extruded film on one side with a pattern of parallel grooves and on the other side with a pattern of parallel grooves which form an acute angle with the grooves on the first side, which forms slits or incipient slits in the film where the grooves cross each other, col. 1, lines 6-13. This is shown in Fig. 1. The film may be made to appear fabric-like, col. 1, lines 16-19. A microphotograph of an apertured film is shown in Fig. 4.

It is clear that Hovis is not at all related to the present invention of making additive granules; rather the disclosure is aimed at a method for making perforated thermoplastic films. Applicants submit that the combination of the disclosures of Tonnvik and Hovis is based on hindsight analysis, which combination can only be arrived at with the knowledge of the present invention.

Further, there is no motivation supplied from the disclosures of Tonnvik or Hovis to combine the teachings therein. This is especially true as Hovis does not at all disclose "comminuting" or granule formation.

Further still, the success of the present invention could not have been expected from the combined disclosures of the cited references. The success of the present invention is demonstrated in working Examples 1-3 on pages 21-24. The present granules exhibit uniform shape and have advantageous bulk material properties.

To summarize, Applicants submit that 1) the limitations of the present claims are not met by the combined disclosure of the cited references, 2) that the combination of Tonnvik and Hovis is

based on improper hindsight analysis, 3) that there is no motivation supplied in Tonrvik or Hovis to combine the teachings therein and 4) that the success of the present invention could not have been expected based on the combined disclosures of the cited references.

For these reasons, Applicants submit that each of the 35 USC 103(a) rejections are addressed and are overcome.

The Examiner is kindly requested to reconsider and to withdraw the present rejections.

Applicants submit that the present claims are now in condition for allowance and respectfully request that they be found allowable.

Respectfully submitted,

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